

MONTHLY WEATHER REVIEW.

VOL. XIII.

WASHINGTON CITY, JANUARY, 1885.

No. 1.

INTRODUCTION.

This REVIEW contains a general summary of the meteorological conditions which prevailed over the United States and Canada during January, 1885, based upon the reports from the regular and voluntary observers of the Signal Service and from co-operating state weather services.

Descriptions of the storms which occurred over the north Atlantic ocean during the month are also given, and their approximate paths shown on chart i.

The paths of eleven atmospheric depressions are traced on chart i. and are described under "Areas of low barometer;" the average number of depressions for the month of January during the last eleven years is 13.4.

The mean pressure for the month differs but slightly from the normal in all parts of the country except in New England and portions of the lake region and middle Atlantic states, where it was from .05 to .10 inch below the normal.

The month was decidedly colder than the average January from the Ohio valley and lower lakes westward to the eastern portions of Montana, Wyoming, and Colorado, and also in Texas, Idaho, and the eastern portions of Oregon and Washington Territory; it was slightly warmer than the average along the coasts of the Atlantic and Pacific.

The precipitation was in excess of the average in the districts east of the Mississippi river and from Missouri and Kansas southward to the Rio Grande river; it was deficient in the extreme northwest, upper Missouri valley, Rocky mountain districts and on the Pacific coast.

The severest snow-storms of the month occurred in the western and southern districts during the passage of low areas v. and x.; in consequence of these storms travel of all kinds was seriously interrupted and heavy losses of live-stock were sustained.

Tornadoes occurred on the 11th in Alabama and Mississippi, and on the 12th in Georgia, causing loss of life and the destruction of much property.

In the preparation of this REVIEW the following data, received up to February 20th, 1885, have been used, viz.: the regular tri-daily weather-charts, containing data of simultaneous observations taken at one hundred and twenty-nine Signal Service stations and seventeen Canadian stations, as telegraphed to this office; one hundred and fifty-three monthly journals and one hundred and sixty-one monthly means from the former, and seventeen monthly means from the latter; two hundred and eighty-one monthly registers from voluntary observers; forty-five monthly registers from United States Army post surgeons; marine records; international simultaneous observations; marine reports through the co-operation of the "New York Herald Weather Service;" abstracts of ships' logs, furnished by the publishers of "The New York Maritime

Register;" monthly reports from the New England Meteorological Society, and from the local weather services of Alabama, Georgia, Illinois, Indiana, Minnesota, Missouri, Nebraska, Ohio, and Tennessee, and of the Central Pacific Railway Company; trustworthy newspaper extracts; and special reports.

ATMOSPHERIC PRESSURE.

[Expressed in inches and hundredths.]

The distribution of mean atmospheric pressure for January, 1885, determined from the tri-daily telegraphic observations of the Signal Service, is shown by the isobarometric lines on chart ii.

The mean pressure for the month is greatest over the middle and northern plateau districts, where an area is inclosed by an isobar for 30.25; it is least over the Canadian Maritime Provinces, where the barometric means fall to 29.88 and 29.89 respectively, at Sidney, Nova Scotia, and Father Point, Quebec. The region inclosed by the isobar for 30.2 embraces the greater part of the United States and extends from the eastern portions of Washington Territory and Oregon southeastward to the Gulf and Atlantic coasts. Along the immediate coasts of Washington Territory and Oregon, and in southern California, the mean pressure decreases to 30.1. An isobar for 30.15 is traced from northern Minnesota to the Virginia coast; to the north and east of this line the barometric means decrease to 29.9 and below, as stated above.

The mean pressure, as compared with that for December, 1884, shows a decrease over the northern portions of the country from central Montana to the Atlantic coast, the deficiencies being greatest in New England and the Maritime Provinces, where they vary from .07 to .15. In all other districts the barometric means are higher than those for December. The increase ranges from .10 to .15 from the lower Mississippi river to the south Pacific coast; from .08 to .18, in northern plateau and north Pacific coast region, and from .20 to .25 in the middle plateau and middle Pacific coast.

The departures from the normal pressure are given in the table of miscellaneous meteorological data; they are also exhibited on chart iv. by lines connecting stations of equal departure. Along the northern boundary of the country from Idaho eastward to the Atlantic coast, and in the upper Ohio valley and middle Atlantic states, the mean pressure is below the normal, the departures being less than .05, except in northern Michigan and in New England, where they vary from .05 to .10; a deficiency of .02 is shown at Cedar Keys, Florida. In all other districts the pressure is above the normal, but the departures are nowhere marked, being less than .05 at all stations, except .07 at Brownsville, Texas, and .05 at Fort Concho, Texas, and Fort Apache, Arizona.

BAROMETRIC RANGES.

The monthly barometric ranges at Signal Service stations are given in the table of miscellaneous data; they were greatest from the upper Mississippi valley to the New England coast, where they varied from 1.40 to 1.74, the greatest being reported from Eastport, Maine; they were least in Florida, California, and in the middle and southern plateau regions, where they varied from .52 to .60, except at Key West, Florida, where the monthly range was .36.